

WHAT IS CLAIMED IS

1. A magnetic disk device removable from an apparatus body, the magnetic disk device comprising:

a case including an elastic supporting member and a locking member;

a driving unit including a magnetic disk and a rotary driver operable to rotationally drive a magnetic disk, wherein the driving unit is installed in the case; and

a connector for connecting the driving unit and the apparatus body;

wherein the elastic supporting member is operable to elastically support the driving unit, force applied to the external of the case is operable to move the locking member to a locked position and an unlocked position, and the driving unit is locked when the locking member is in the locked position and unlocked when the locking member is the unlocked position.

2. The magnetic disk device of Claim 1, wherein a front portion corresponds to a side of the magnetic disk device in which the connector is disposed and a rear portion corresponds to the side opposite to the front portion, the locking member reaches the unlocked position by moving towards the front portion of the magnetic disk device relative to the case, and the locking member reaches the locked position by moving towards the rear portion of the magnetic disk device relative to the case.

3. The magnetic disk device of Claim 1, wherein the locking member is biased by a biasing member in the direction of the unlocked position.

4. The magnetic disk device of Claim 1, wherein the locking member is disposed at an inner side of the case, and has a switching protrusion exposed at an outer surface of the case that may be accessed from the exterior of the case.

5. The magnetic disk device of Claim 2, wherein a side surface of the case has a slit, the locking member is movable toward and away from the front portion of the magnetic disk device, and the switching protrusion on the locking member is located in the slit.

6. The magnetic disk device of Claim 5, wherein the side surface of the case has a groove extending forward and backward, and the slit opens in the groove.

7. The magnetic disk device of Claim 1, further comprising:

a body connector coupled with the connector;

a switching protrusion coupled with the locking member;

a first engager operable to engage a first end of the switching protrusion;

a second engager operable to engage a second end of the switching protrusion;

wherein the locking member is in the locked position when the first engager is engaged with the first end of the switching protrusion and the second engager is engaged against the second end of the switching protrusion.

8. An apparatus for mounting a magnetic disk device, comprising:

a body connector, the body connector operable to be coupled with a connector of a magnetic disk device;

a first engager, the first engager operable to engage with a locking member and move the locking member to the locked position such that the front portion of the magnetic disk device may be inserted into the body connector; and

a second engager, the second engager operable to engage the locking member in order to move the locking member to the unlocked position to allow the magnetic disk device to be removed.

9. The apparatus for mounting a magnetic disk device of Claim 8, further comprising a sliding member and an engaging member, the sliding member coupled with the magnetic disk device and moving with the magnetic disk device when the magnetic disk device is inserted, the engaging member moving in response to the movement of the sliding member in a direction perpendicular to the direction of movement of the sliding member.

10. The apparatus for mounting a magnetic disk device of Claim 9 wherein the movement of the engaging member toward the body connector engages the second engager with the locking member.

11. The apparatus for mounting a magnetic disk device of Claim 9 wherein the movement of the engagement member away from the body connector moves the second engager away from the locking member.

12. The apparatus for mounting a magnetic disk device of Claim 9, wherein the second engager is integrated with the engaging member.

13. An apparatus for mounting a magnetic disk device, comprising:

a case including a locking member, the locking member operable to move to a locked position and an unlocked position,

a body connector, the body connector operable to connect with a connector of a magnetic disk device;

a first engager, the first engager operable to move into a groove in a side surface of the case and engage a switching protrusion on the locking member in order to move the locking member to a locked position, and

a second engager, the second engager operable to engage the switching protrusion on the locking member to move the locking member to an unlocked position.

14. An apparatus comprising:

a body for removably mounting a magnetic disk device;

the magnetic disk device comprising a case, a driving unit, and a connector;

the driving unit including a magnetic disk and a rotary driver operable to rotationally drive the magnetic disk, and being installed in the case;

the connector operable to connect the driving unit to the body;

the case including an elastically supporting member operable to elastically support the driving unit, and a locking member, the locking member operable to move to a locked position and an unlocked position; and

the body comprising a body connector operable to connect with the connector of the magnetic disk device, and a switching unit operable to move the locking member to the lock position.

15. The apparatus of Claim 14, wherein the locking member is coupled with a biasing member.

16. The apparatus of Claim 14, wherein the locking member is disposed at an inner side of the case, and includes a switching protrusion operable from the exterior of the case.

17. The apparatus of Claim 16, wherein a side surface of the case includes a slit, the locking member is movable toward and away from a front portion of the magnetic disk device, and the switching protrusion on the locking member is located in the slit.

18. The apparatus of Claim 17, wherein the side surface of the case has a groove extending forward and backward, and the slit opens in the groove.

19. The apparatus of Claim 15, wherein the switching unit comprises a first engager and a second engager, the first engager engages the locking member in order to move the locking member to the lock position by force for inserting the magnetic disk device when the front portion of the magnetic disk device is inserted into the body connector, and the second engager engages the locking member in order to move the locking member to the unlock position by force for removing the magnetic disk device when the magnetic disk device is removed.

20. The apparatus of Claim 19, wherein the body further comprises a switching setting mechanism operable to respond to the insertion of the magnetic disk device and engage the second engager to the locking member when the magnetic disk device is inserted.

21. The apparatus of Claim 20, wherein the switching setting mechanism is operable to move the second engager away from the magnetic disk device after the second engager allows the locking member to move to the unlocked position when the magnetic disk device is removed.

22. The apparatus of Claim 21, wherein the switching setting mechanism comprises a sliding member and an engaging member, the sliding member coupled with the magnetic disk device and moving with the magnetic disk device when the magnetic disk device is inserted, the engaging member moving in response to the movement of the sliding member in a direction perpendicular to the direction of movement of the sliding member.

23. The apparatus of Claim 22, wherein the second engager is integrated with the engaging member.